Description of a new species of *Agathodonta* (Gastropoda: Trochidae: Eucyclinae: Chilodontini) from Indonesia and the Philippine Islands

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Abstract : *Agathodonta elongata* n.sp. is described and compared with similar eucyclinid species from the Indo-Pacific area.

Résumé : *Agathodonta elongata* n.sp. est décrite et comparée avec des espèces analogues d'Eucyclinae provenant de la zone Indo-Pacifique.

INTRODUCTION.

A few months ago, Fernand De Donder, a well known shell collector who use to travel all around the Philippine Islands, entrusted me with a very strange trochid-shell according to the shape of its very elongate aperture. A same shell was found in the material of the French oceanographic expedition Karubar that was lead in Indonesia (Tanimbar Island and Kai Islands). Further studies, especially through fossils species, showed that these two shells were different from any other I ever examined and remained undescribed. The genus *Agathodonta* seems the most appropriate.

Abbreviations.

Repository
MNHN : Muséum national d'Histoire naturelle, Paris.

Others abbreviations
P1, P2, P3, ... : primary cords (P1 is the most adapical)
dd : no live-taken specimens present in sample
lv : live-taken specimens present in sample

SYSTEMATICS

Family: **TROCHIDAE** Rafinesque, 1815
Subfamily : **EUCYCLINAE** Koken, 1897
Tribe : **Chilodontini** Wenz, 1938
Genus: ***Agathodonta*** Cossman, 1918
Type species: *Trochus dentigerus* Orbigny, 1843 (by original designation) – European Lower Cretaceous

Agathodonta elongata n.sp.

Figs 4-10

Type material.
Indonesia, Kai Islands. Karubar, stn. DW32, 05°47'S 132°51'E, 170-206 m deep, holotype MNHN, 19.3 x 11.6 mm (dd);

Philippine Islands, N. Mindanao, North of Dipolog, Aliguay Island, 150-300 m deep, trawled by pan-boats using tangle nets, paratype, 21.2x14.2 mm (dd), collection F. De Donder*.

Diagnosis.

A typical chilodontini-species, with nearly flat worls bearing coarse spiral cords and chiefly a large aperture transversely elongated with a straight outline.

Description.

Shell of tall size for the genus (height up to 22.7 mm, width up to 14.6 mm); spire high, almost conical, 1.4 higher than aperture in mean, apical angle about 57°, anomphalous.
Protoconch superficially smooth, but actually with small pits. Slight axial prosocline ribs on abapical part. Terminal varix undistinct. Number of whorls impossible to estimate on available specimens (protoconch damaged).
Teleoconch of 5.5 to 6 whorls, bearing coarse spiral cords. Suture visible, not canaliculated, shell depressed between penultimate suprasutural and subsutural cords. First whorl of teleoconch slightly convex, sculptured by five primary spiral cords crossed by weaker axial ribs, producing granules at intersection; spiral cords of same size except P5 that is weaker and partially hidden by next whorl; distance between cords equal in size then breadth of P1-P4; area between P4 and P5 recessed. Next whorls nearly flat; four adapical beaded cords evenly distributed, beads connected by obvious prosocline ribs; P1 becoming a little stronger than others; suprasutural P5 fully visible, still weaker, becoming scaly on last whorls, prosocline ribs arising from scales not necessarily connecting to granules of P4. Sculpture of last whorl similar, but slightly more

* Melsbroeksestraat, 21, 1800, Vilvoorde-Peutie, Belgium.

convex, showing rounded periphery. Aperture ovate, transversely elongated, with a straight outline when looking at shell from profile; outer lip flaring, lirate within with 8 primary plications and one or two secondary plications intercalated between them.
Columella straight, opisthocline, with two prominent teeth; abapical tooth stronger, bifid or trifid; columellar shield strong with denticles near columella, almost concealing basal cords over which it lies.
Base nearly flat, with 5 spiral cords encountered by fine axial threads; outer cords beaded, inner cords becoming scaly; space between cords of same breadth than cords.
Colour of protoconch brownish. Teleoconch whorls light brown; large axial dark brown or blackish-brown markings on specimen from Philippine Islands.
Operculum : unknown.

Discussion.

At first look, this species is different from any other trochid species I know. It belongs undoubtedly to the tribe Chilodontini, Eucyclinae. In the Recent genera of this tribe, it seems that the new species has to be assigned to the genus *Agathodonta* Cossman, 1918, because there is here no varice as in *Danilia* Brusina, 1865. No one of the fossil genera of the tribe seems to be a better choice : aside the shape of the spire and of the aperture, *Wilsoniconcha* Wenz, 1939 (= *Wilsonia* Huddleston, 1896) is pupiform, *Chilodontoidea* Huddleston, 1896 has three columellar teeth, *Chilodonta* Etallon, 1862 presents five teeth in the aperture, *Pseudoclanculus* Cossmann, 1918 has one single large columellar tooth, *Calliovarica* H. Vokes, 1939 has varices.
Within the genus, not any of the Recent species (only two currently known : *Agathodonta nortoni* McLean, 1984 (Figs 11-13) and *A. meteorae* Neubert, 1998) is similar. They are smaller, have more convex whorls and circular (or slightly ovate) aperture, never transversely elongated. *A. nortoni* has 6 spiral cords on last whorls (with a seventh emerging).
Among fossil species belonging to *Agathodonta*, *A. dentigera* (Orbigny, 1843) (Fig 1), type species of the genus (European Neocomian stage of the Lower Cretaceous), shows same characteristics as Recent species and shows more numerous spiral cords. Other fossil species as *A. guyotiana* (Pictet & Roux, 1849) (Fig 2) and *A. tollotiana* (Pictet & Roux, 1849) (Fig 3), from European Albian stage of the Lower Cretaceous, also lack the elongated aperture observed in *A. elongata*, are more depressed and their whorls have many more spiral cords.

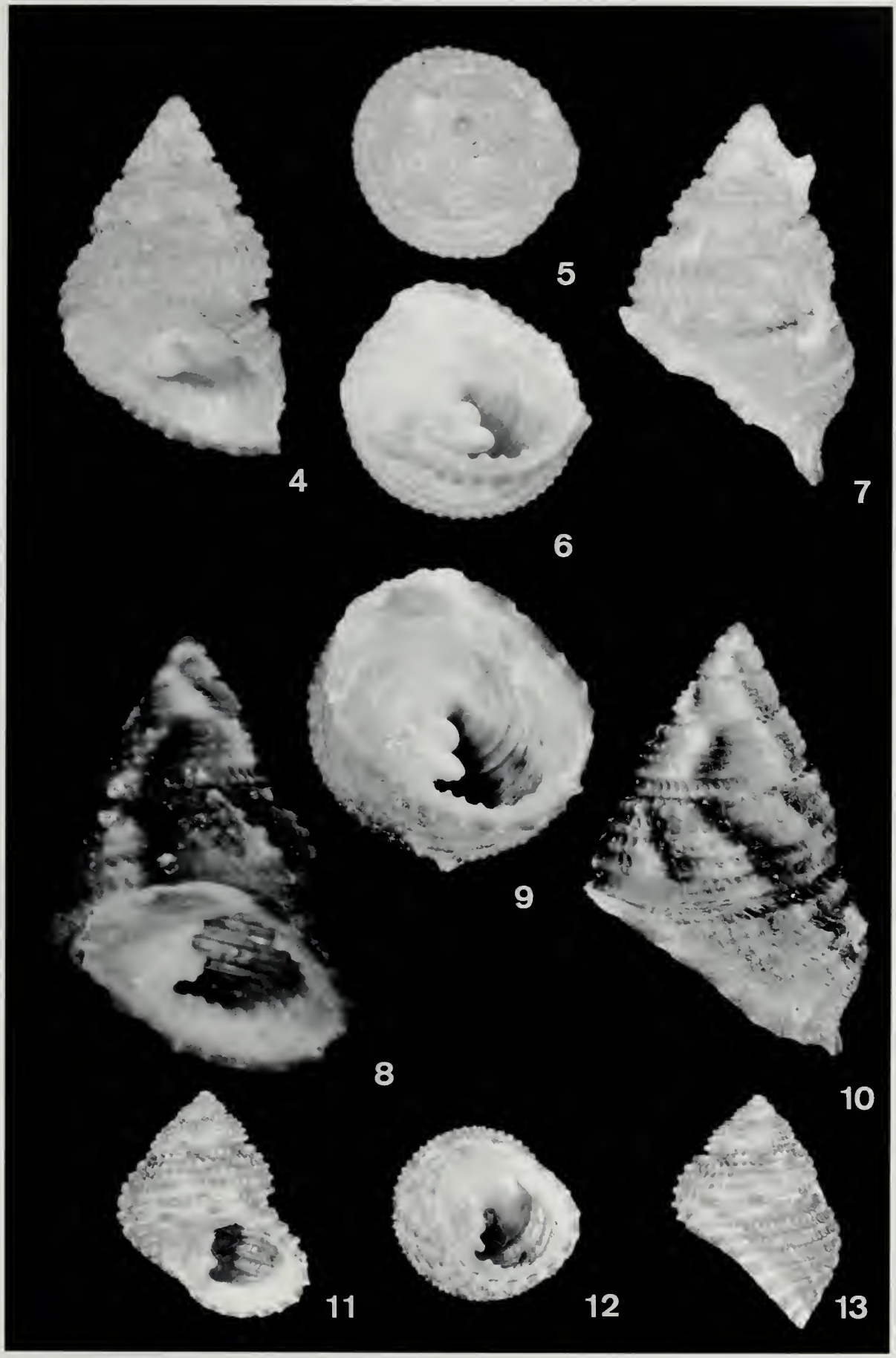
Etymology.

The new species is named for the peculiar shape of the aperture of the shell.

1. *Agathodonta dentigera* (d'Orbigny, 1843), from d'Orbigny.
2. *Agathodonta guyotiana* (Pictet & Roux, 1849), from Pictet & Roux.
3. *Agathodonta tollotiana* (Pictet & Roux, 1849), from Pictet & Roux.

Figures 4-13

4-7. *Agathodonta elongata* n.sp., holotype MNHN, Indonesia, Kai Islands, 19.3 x 11.6 mm.
8-10. *Agathodonta elongata* n.sp., paratype, Philippine Islands, N. Mindanao, North of Dipolog, Aliguay Island, coll. F. De Donder, 21.2x14.2 mm.
11-13. *Agathodonta nortoni* McLean, 1984, Philippine Islands, Bohol, Balicasag Is., coll. C. Vilvens, 11x8.6 mm.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